KARTIKEYA ACHARYA

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Education

The LNM Institute of Information Technology (Jaipur, India)   **2021 - 2025**
- B. Tech in *Electronics and Communication Engineering*   (expected)

Lord Buddha Public School (Kota, India)   **2020 - 2021**
- *CBSE (Class XII), Aggregate: 83.20*

M.S.S. Public School (Kishangarh, India)   **2018 - 2019**
- *CBSE (Class X), Aggregate: 94.00*

Skills

Programming Languages: *Python, MATLAB, C++* | Machine Learning Frameworks: *TensorFlow, PyTorch, Keras, scikit-learn*

Data Manipulation, Analysis & Visualization: *Pandas, NumPy, SciPy, Matplotlib* | DBMS: *MySQL* | Version Control: *Git*

Relevant Coursework

Machine Learning & Deep Learning (Andrew Ng) | Cooperative Communication in Next Generation Systems | Computer Networks | Digital Signal Processing | Digital Communication | Data Structures & Algorithms | Probability and Statistics

- Compilation of my laboratory work implemented using languages (MATLAB, VHDL and C++), compiled on (MATLAB, Vivado and Omnet++), documented using LaTeX: *labwork_LNMIIT*

Area of Research Interest

Semi/Unsupervised Learning, Reinforcement Learning, Computer Vision, NLP

Work Experience

Teaching Assistant (Under **Dr. Gaurav Chatterjee**) | Electronics Laboratory, LNMIIT   **Oct'22 - Feb'23**
Worked under distinguished professors and lab superintendents. Responsibilities encompassed supporting the instruction and guidance of junior students with a batch strength of 40+, in circuit theory, design, and simulation, along with analog and digital electronics. Provided hands-on assistance, technical support, and facilitated seamless lab sessions.

Projects

Voice Controlled Virtual Assistant   **Feb'24**
Engineered and deployed an AI assistant with speech recognition and system control capabilities; improved task management efficiency by 40% and reduced response time by 30%. Trained using T4 GPU via numerous epochs and data of over 75k queries, it is quick and responsive in solving a variety of queries and handling general tasks (majorly related to chrome browser).
- Key Skills: TensorFlow, NumPy, PyTorch, Selenium, BS4, OCR, LLM, NLP, Voice Recognition
- Repository: *jarvis_automation*

Hand Gesture & Sign Language Detector   **Jan'24**
A Computer Vision based model trained on data sets of over 300 inputs for a particular gesture is able to detect and identify human hands gestures effortlessly and is able to track the coordinates for further modifications in its usage for controlling devices like mouse and windows (control features are in development).
- Key Skills: OpenCV, Media Pipe, TensorFlow, NumPy, Computer Vision, Deep Learning
- Repository: *handgesture_detection_opencv*

Portfolio Website   **Oct'23**
A simplistically designed static landing page, utilizing VanillaJS for responsiveness and graphical elements, offers insights into my background and learning journey.
- Key Skills: HTML, JavaScript, CSS
- Website: *portfolio-kartikeya.vercel.app/*
- Repository: *portfolio_kartikeya*

Positions of Responsibility

Capriccio – Music Club of LNMIIT | Coordinator   **Mar'23 - Present**
- Managed a society/club of 85+ members which includes musicians, songwriters, and a variety of skilled people.
- Managed events, competitions, and finances of the club, and involvement of club in different colleges/universities.

Cultural Council of LNMIIT | Senator   **May'22 – Apr'23** .
- Followed all senatorial duties for the cultural council which involved different aspects of managing events, permissions, funds, and activities.
- Also was a part of the Vivacity Organizing Committee, successfully organizing the second largest cultural fest of Rajasthan.